

During a routine sample monitoring of municipal supply wells on December 19, 1989 by the Sellersville Borough Municipal Water Works (SBMWW), well no. 5, located 900 feet south of the site, was found to contain 22.6 ppb of trichloroethene (TCE), which resulted in the shutdown of the supply well.

In March 1990, SBMWW collected water samples from the PTI property and from supply well no. 5 as a result of the aforementioned shutdown of supply well no. 5. One water sample was collected from a galvanized pipe that runs out of the southern end of the landfill into a small tributary. The samples from the pipe were found to contain elevated levels of 1,1,1-trichloroethane (1,1,1-TCEA; 54 ug/l) and TCE (30 ug/l). Municipal supply well no. 5 was purged for two hours before it was sampled. The water samples revealed concentrations less than 0.5 ug/l of 1,1,1-TCEA and TCE.

The site was identified by the Bucks County Health Department and referred to the Pennsylvania Department of Environmental Resources (PA DER) for further investigation.

Fred Walter, of PA DER, was informed of the site. Mr. Walter inspected the old landfill on May 16, 1990. After inspecting the site, Mr. Walter referred the site to EPA. Based on the analytical data submitted, Mr. Walter recommended further action.

Potential Targets

The environmental concerns at the site are primarily surface water, groundwater, and soil contamination. Residents of the study area are served by public water supply companies and private domestic sources. The public supplies utilize surface water and groundwater as their sources.

SBMWW serves a population of about 5,000 people. SBMWW utilizes two municipal supply wells and one surface water intake. One supply well is located within 0 to 1/4 mile from the site and serves 1,650 people. Another supply well is located within 1/2 to 1 mile from the site and serves 1,650 people. The surface water intake is located within 1 to 2 miles northwest of the site, receives no drainage from the site, and serves 1,650 people.

Allegedly, the site was used by Lamar Barndt, a local hauler, in the 1940s as a disposal area for waste from U.S. Gauge. U.S. Gauge, which allegedly manufactured aircraft dials with a radium-based paint, is located in southern Sellersville, Pennsylvania. Richard Coll, the borough manager, said he had found old aircraft dials on the site. A plastic bag containing a jar of radium paint, pieces of a broken jar, and several cubic feet of contaminated soil were removed from the site by Radiation Service Organization (RSO), of Laurel, Maryland. RSO was hired before the sale of the property to PTI to conduct an environmental assessment of the property. The exact date of the removal of the material is not known.

The Inactive Landfill was identified by the Bucks County Health Department. The site was referred to the Pennsylvania Department of Environmental Resources (PA DER) for further investigation.

Water samples were taken on March 28, 1990 by the Sellersville Borough. The first sample was taken from a pipe that runs out of an old landfill that is located on the northern portion of the property. The sample results showed a high amount of trichloroethylene (TCE) and 1,1,1-trichloroethane (1,1,1-TCEA) in the water that ran out of this pipe. The second sample was taken out of the raw water at production well no. 5, which is south of the site, after the well was purged for approximately two hours. The results showed less than 0.5 ug/l of TCE and 1,1,1-TCEA.

The water supply for the residents of the study area is served by public water supply companies and private water supply wells. The public supplies utilize surface water and groundwater as their sources. The Sellersville Borough Municipal Water Works (SBMWW) serves a population of about 5,000 people in Sellersville Township and a portion of West Rockhill Township with surface water and groundwater. The surface intake is located on the Smoketown Creek catch basin, about 1.8 miles northwest and upstream of the site. SBMWW utilizes two wells located on Maple Avenue (well no. 4) and Ninth Street (well no. 5). Well no. 4 is located about 0.5 mile south of the site. The total population dependent on groundwater for its potable water supply in a 1-mile radius is approximately 5,000 persons. The total population dependent on groundwater for its potable water supply in a 3-mile radius is approximately 33,810 persons.

The total population dependent on groundwater for its potable water supply within a 1-mile radius is approximately 5,000 persons. A total population of 33,810 people are served by groundwater sources located within a 3-mile radius of the subject site.^{1,15,17,18,19,20,21,22}

3.2 Surface Waters

Surface water drainage from the landfill area flows to the south directly into a small unnamed perennial stream that flows in a southward direction through the site. A decayed rusted drum was observed in this stream approximately 150 feet south of the landfill. The stream is joined by another small unnamed perennial stream approximately 200 feet south of the landfill. The site consists of 1.74 acres of wetlands along the two perennial streams. The joined stream flows approximately 1,000 feet directly adjacent to a municipal well (no. 5) owned by the Sellersville Borough Municipal Water Works. Well no. 5 has been out of operation for approximately two years. The unnamed stream that flows adjacent to well no. 5 flows 3/4 stream mile southwardly and into the East Branch Perkiomen Creek, which is a trout-stocked fishery.^{1,2,4,6,23}

3.3 Hydrogeology

The geologic and hydrogeologic conditions in the study area were researched as part of the site investigation. A preliminary literature review was conducted to determine surface and subsurface geologic conditions, soil character, and the status of groundwater transport and storage.

3.3.1 Geology

The inactive landfill site is located within the Triassic Lowland Section of the Piedmont Physiographic Province (see figure 3.1, page 3-4). The large part of the study area is drained by the East Branch Perkiomen Creek and its tributaries. The maximum relief is 300 feet in the southern part of the study area and 500 feet in the northern part.^{1,24}

3.5 Land Use

Suburban residential areas are located north, south, east, and west of the site. The Faith Baptist Church and School are located less than 1/4 mile north of the site. Approximately 500 feet south of the property line is a municipal well (well no. 5). Areas on the western side of the property are used for recreational motorbike activities. The site property is surrounded by residential properties to the southwest, northeast, and southeast.^{1,2}

3.6 Population Distribution

The estimated population within a 0- to 1-mile radius of the subject site is 4,598 persons. Within a 1- to 2-mile radius of the subject site, the population is 6,650 persons; within a 2- to 3- mile radius of the site, the population is 5,183. The total population within a 3-mile radius of the site is approximately 16,431 persons. These figures are based on a house count of homes in the area multiplied by 3.8 persons.¹

3.7 Critical Environments

Two federally listed endangered birds are expected to be found as transient species in the project area. They are the bald eagle (Haliaeetus leucocephalus) and the peregrine falcon (Falcon peregrinus). There are no listed critical habitats for these species in the project area.³⁰